

REMARKS

The Office Action mailed January 4, 2006 has been received and the Examiner's comments carefully reviewed. Claims 1-8 have been allowed. Applicants thank the Examiner for this notification. Claims 11 and 19 have been amended. Claims 20-21 have been added. No new subject matter has been added. Claim 15 has been cancelled. Claims 1-14 and 16-21 are currently pending. Applicants respectfully submit that the pending claims are in condition for allowance.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 9-19 under 35 U.S.C. §102(b) as being anticipated by either the Switzerland Patent (SH 689632 A5) or Axelsson et al. (U.S. Patent 4,033,732). Applicants respectfully traverse this rejection, but have amended claim 19 to advance this application to allowance. Applicants reserve the right to pursue the original subject matter via a continuing application.

1. **Re: the Swiss Patent (SH 689632 A5)**

The Swiss patent discloses a filter having a contaminated air chamber 11, a purified air chamber 22, and a rinsing tank 26. Filtering tubes 14, 15 interconnect the contaminated air chamber 11 to the purified air chamber 22. A valve 31 is provided for controlling a counter rinsing device. A nozzle (A) (see attached, annotated FIG. 2) is connected to an upper surface (E) and a lower surface (H) of the rinsing tank 26. The upper surface (E) of the rinsing tank 26 has passages 39 (see attached, annotated FIGS. 2 and 3) for pressurized air. See attached Abstract.

A. **Claim 9**

Claim 9 recites a nozzle for use with a filter cleaning system. The nozzle includes a nozzle body defining a first end and a second end. The second end has multiple exhaust tubes. The nozzle also includes a diffuser arrangement located adjacent to the second end. The diffuser arrangement includes a number of wedge constructions.

The Examiner has not provided an explanation as to how the components of the Swiss patent meet the structural limitations of claim 9. Applicants must therefore assume

that the nozzle (A) described in the abstract of the Swiss patent is the component that the Examiner intended to characterize as the nozzle of claim 9. If this assumption is incorrect, and the Examiner intends to maintain the rejection of claim 9, Applicants respectfully request a new office action providing a clear basis for this rejection. Applicant further submit that any new office providing such basis must be non-final so as to properly provide Applicants an opportunity to respond to the Examiner's concerns.

Claim 9 requires that the second end of the nozzle body define multiple exhaust tubes. The second end (B) of the nozzle (A) of the Swiss Patent defines a single exhaust tube, not multiple exhaust tubes. Claim 9 also requires a diffuser arrangement located adjacent to the second end (B), the diffuser arrangement including a number of wedge constructions. The Swiss Patent does not have a diffuser arrangement, as characterized in claim 9.

At least for these reasons, Applicants respectfully submit that claim 9 is patentable.

B. Claim 10

Claim 10 recites an arrangement for use with a filter cleaning system. The arrangement includes a valve mounted to a manifold. The valve has a valve body and first and second seals. The first seal provides sealing contact between the valve body and a first outer surface of the manifold; the second seal provides sealing contact between the valve body and the interior of the manifold. The valve also includes openings formed in the valve body and located within the interior of the manifold, and a diaphragm that controls fluid communication through the valve.

The Examiner has not provided an explanation as to how the components of the Swiss patent meet the structural limitations of claim 10. Nonetheless, Applicants will try to respond to this rejection by assuming that the valve 31, the diaphragm (C), the passages 39, and the rinsing tank 26 described in the abstract of the Swiss patent, and shown in the attached annotated Figures, are the components that the Examiner intended to characterize in accordance with claim 10. If this assumption is incorrect, and the Examiner intends to maintain the rejection of claim 10, Applicants respectfully request a new office action providing a clear basis for this rejection. Applicant further submit that

any new office providing such basis must be non-final so as to properly provide Applicants an opportunity to respond to the Examiner's concerns.

Claim 10 recites an arrangement having openings formed in a valve body that provide fluid communication between the valve and a manifold, the openings being located within the interior of the manifold when the valve is mounted to the manifold. The openings 39 of the Swiss patent are not formed in the valve 31, but rather are formed in the upper surface (E) of the rinsing tank 26.

At least for this reason, Applicants respectfully submit that claim 10 is patentable.

C. Claims 11-18

Claim 11 recites a valve having a valve body, a mounting flange interconnected to the valve body, and a plurality of openings formed between the mounting flange and the valve body. Openings between the valve body and flange are in fluid communication with a fluid passage defined by the valve body.

Applicants respectfully submit that the Swiss Patent does not disclose a plurality of openings formed between a valve body and a mounting flange interconnected to the valve body. Referring to the attached FIG. 2 of the Swiss patent, the valve 31 includes a valve body (F) and an interconnected mounting flange (G). There are no openings formed between the mounting flange (G) and the valve body (F) of the valve 31. In the Office Action, the Examiner appears to characterize the nozzle (A) of the Swiss patent as a part of the valve body (F). The nozzle (A), however, is a component separate from that of the valve 31 and the valve body (F). Nonetheless, claim 11 recites a valve having a plurality of openings. The Swiss patent has a plurality of openings 39. The openings 39 are formed in the tank 26, however, not the valve 31.

At least for this reason, Applicants respectfully submit that independent claim 11, and dependent claims 12-18 are patentable.

D. Claim 19

Claim 19 recites a method of servicing a filter cleaning system for a gas turbine air intake system. The method includes providing a gas turbine air intake system that has a frame with an apertured tube sheet and a plurality of filter elements mounted adjacent

to apertures in the tube sheet. The gas turbine air intake system cleans gas by drawing gas through an upstream side of the filter elements, through the filter elements, and through apertures in the tube sheet. The tube sheet has an upstream side (corresponding to the exposed upstream sides of the filter element), and a downstream side. The method further includes accessing the filter cleaning system from the upstream side of the tube sheet, the filter cleaning system including manifold and pulse valve arrangements.

Claim 19 recites the step of providing structure that was previously recited in the preamble. Applicants therefore submit that the Examiner's rejection based upon not giving such structure patentable weight is moot. Applicants further submit that the Swiss patent does not disclose the structure recited in subparagraph (a) of claim 19. Applicants respectfully submit that claim 19 is patentable.

2. Re: Axelsson (4,033,732)

Axelsson discloses a blow cleaning system having a pressure tank 1, a valve means 8 and a distribution passage 4. "The distribution passage 4 . . . is provided with flow openings in the form of nozzle pipes 5 or in the form of apertures 7" Column 3, lines 42-45.

A. Claim 9

Claim 9 recites a nozzle for use with a filter cleaning system. The nozzle includes a nozzle body defining a first end and a second end. The second end has multiple exhaust tubes. The nozzle also includes a diffuser arrangement located adjacent to the second end. The diffuser arrangement includes a number of wedge constructions.

The Examiner has not provided an explanation as to how the components of Axelsson meet the structural limitations of claim 9. Applicants must therefore assume that the distribution passageway 4 of Axelsson, having nozzle pipes 5, are the components that the Examiner intended to characterize respectively as the nozzle body having multiple exhaust tubes of claim 9. If this assumption is incorrect, and the Examiner intends to maintain the rejection of claim 9, Applicants respectfully request a new office action providing a clear basis for this rejection. Applicant further submit that

any new office providing such basis must be non-final so as to properly provide Applicants an opportunity to respond to the Examiner's concerns.

First, claim 9 recites a nozzle including a nozzle body having multiples exhaust tubes. Axelsson discloses a distribution passage 4 having multiple pipes 5. Claim 9 further requires, however, a diffuser arrangement located adjacent to the multiple exhaust tubes. Axelsson does not disclose a diffuser arrangement located adjacent to the pipes 5. At least for this reason, Applicants respectfully submit that claim 9 is patentable.

Without a clear understanding of this rejection, Applicants will further attempt to address the Examiner's comments concerning the "wedge construction." It appears that the Examiner may be construing the pipes 5 as wedge constructions, without properly addressing the requirement of multiple exhaust tubes. Even with this, the pipes are tubular in cross-section, not wedge-shaped, as required by claim 9. To anticipate a claim, the cited reference must disclose each and every structural limitation of the claim. Applicants respectfully submit that the pipes 5 do not properly anticipate the recited limitation of wedge constructions, and that claim 9 is therefore patentable.

Yet further, the Examiner stated that with regards to the "wedge construction," it would have been obvious to design the diffuser with any kind of construction; further, that it is well settled that a mere change of shape without affecting the function of the part is an obvious design modification. Applicants respectfully submit that providing a diffuser with wedge constructions, as opposed to tubular pipe constructions, significantly affects the function of the part, and therefore precludes a conclusion that such constructions are obvious.

In particular, Applicants' specification discloses that the wedge constructions are generally oriented relative to the multiple exhaust tubes such that airflow from the exhaust tubes is directionally angled or diffused by the shape of the wedges. That is, a jet of airflow from one of the multiple exhaust tubes is separated by the wedges into a plurality of individual and separate jet flow portions to fill the clean air plenum of differently arranged filter elements. The "wedge" shape of the constructions does in fact significantly affect the diffusing function of the nozzle. The wedge-shaped constructions are therefore not merely an obvious change in shape.

At least for these reasons, Applicants respectfully submit that claim 9 is patentable.

B. Claim 10

Claim 10 recites an arrangement for use with a filter cleaning system. The arrangement includes a valve mounted to a manifold. The valve has a valve body and first and second seals that provide sealing contact between the valve body and the manifold. The valve also has a diaphragm that controls fluid communication through the valve.

Axelsson does not disclose an arrangement including a valve with first and second seals, and a diaphragm. In particular, Axelsson does not disclose a first seal that provides sealing contact between the valve body and the outer surface of a manifold. Axelsson instead simply discloses a diaphragm 11. The diaphragm 11 provides sealing contact between a valve hat and the pressure tank 1; sealing contact is not provided by a seal, as required by claim 10.

The diaphragm 11 of Axelsson cannot properly constitute both the separate elements of a diaphragm and a first seal, as recited in claim 10. To anticipate a claim, the cited reference must disclose each and every element of the claim. At least because Axelsson does not disclose a first seal, a second seal, and a diaphragm, Applicants respectfully submit that claim 10 is patentable.

C. Claims 11-18

Claim 11 recites a valve including a valve body that defines a fluid passage. The fluid passage tapers from a first end of the fluid passage to a second opposite end of the fluid passage.

Axelsson discloses a distribution pipe 4. The distribution pipe 4 is constructed from a straight tube. The distribution pipe 4 does not taper from a first end to a second end. At least for this reason, Applicants respectfully submit that independent claim 11, and dependent claims 12-18 are patentable.

D. Claim 19

Claim 19 has been amended to recite the step of providing structure that was previously recited in the preamble. Applicants submit that Axelsson does not disclose the structure recited in subparagraph (a) of claim 19, and that claim 19 is therefore patentable.

Claim 20-21

New claims 20-21 depend upon claim 9. At least for the reasons discussed above with regards to independent claim 9, Applicants respectfully submit that dependent claims 20-21 are patentable.

Allowable Subject Matter

Claims 1-8 have been allowed. Applicants thank the Examiner for this notification.

SUMMARY

It is respectfully submitted that each of the presently pending claims (claims 1-14 and 16-21) is in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicants' representative at the below-listed telephone number if it is believed that prosecution of this application may be assisted thereby.

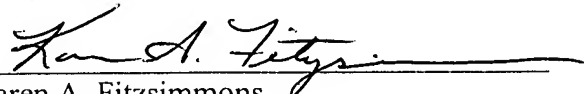
Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicants reserve the right to raise these arguments in the future.

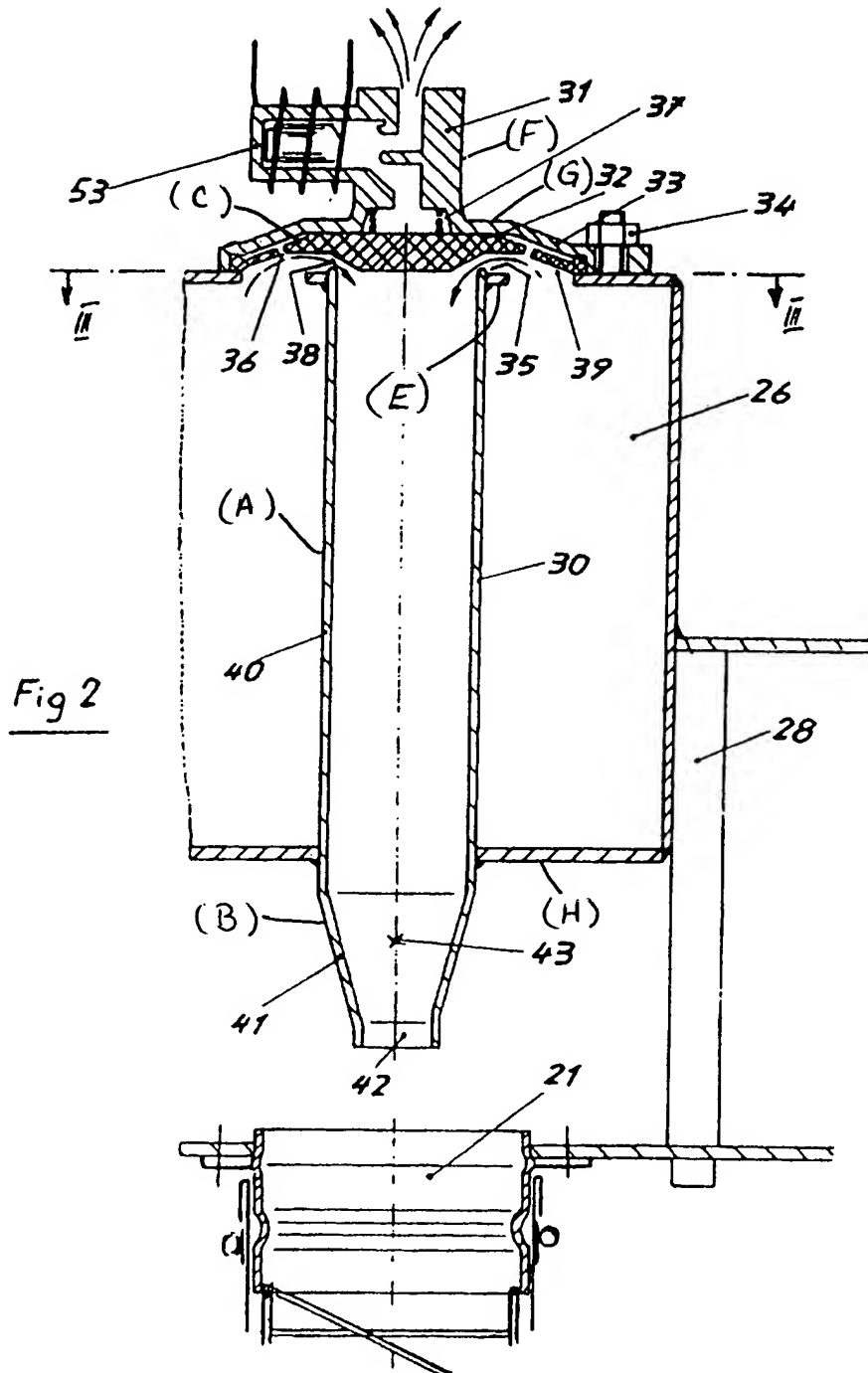
Respectfully submitted,



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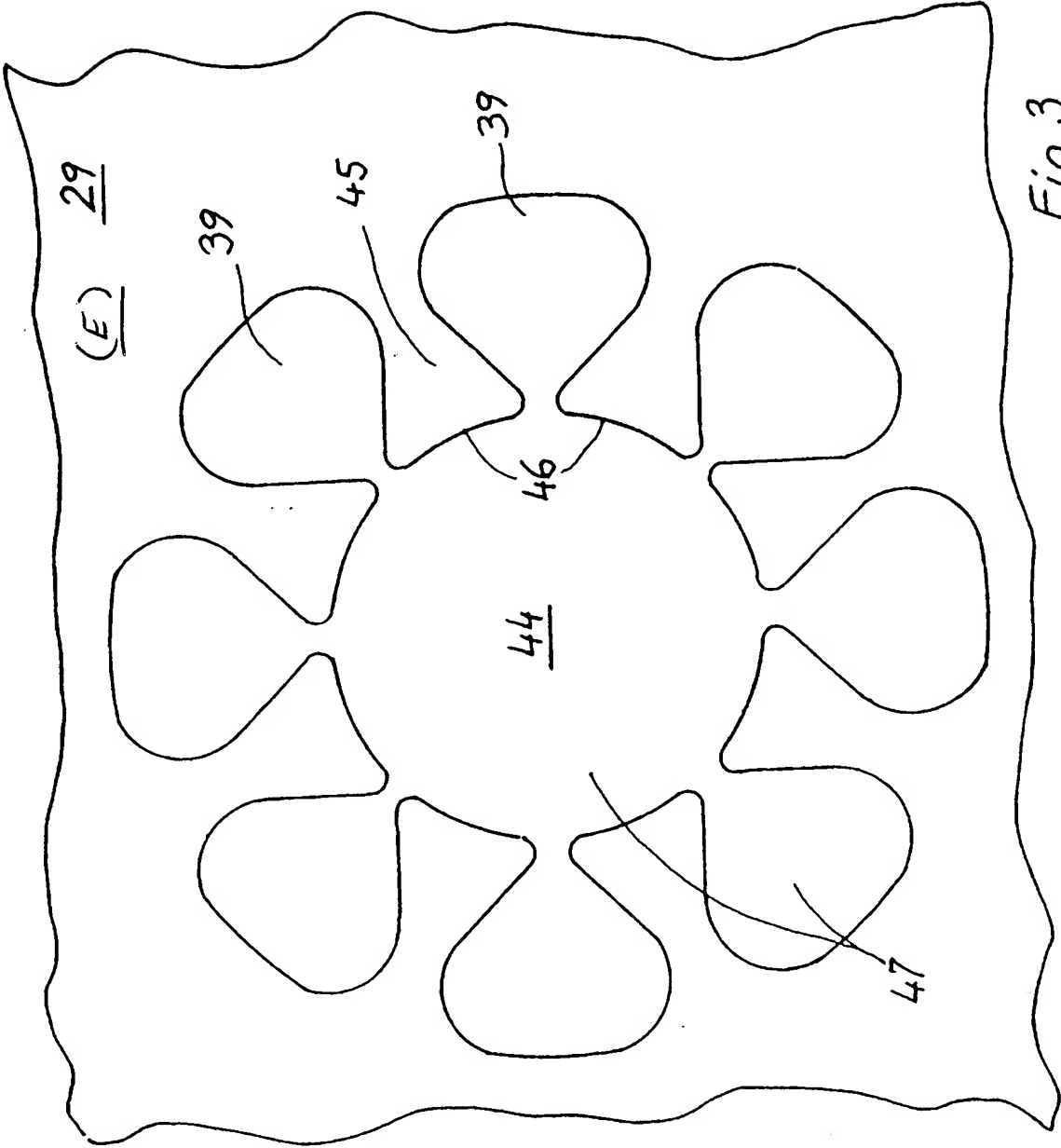


Fig. 3

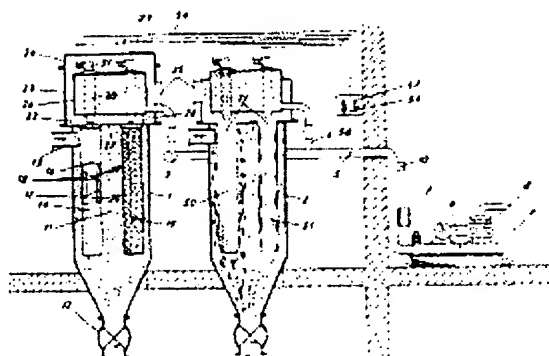
Low pressure filter used for cleaning air contaminated with dust comprises a chamber for the contaminated air, a chamber for the purified air, and a rinsing tank

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Inventor: WANDELER PETER (CH)
Applicant: BUEHLER AG (CH)
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- international: **B01D46/04; B01D46/04; (IPC1-7): B01D46/00**
- european: B01D46/04P
Application number: CH19940003817 19941219
Priority number(s): CH19940003817 19941219

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Abstract of CH689632

Low pressure filter (1,2) comprises a chamber (11) for the contaminated air; a chamber (22) for the purified air; and a rinsing tank (26). The chamber for contaminated air is connected by low pressure filter tubes (14,15) to the chamber for purified air via openings (21) and has a valve (31) for controlling a counter rinsing device. The valves are connected to the rinsing tank and a mouthpiece formed as a nozzle provided on the inner chamber of each filter tube is connected to the upper and lower surfaces of the rinsing tank. The upper surface of the rinsing tank has passages (39) for pressurized air. The passages are arranged concentrically around the nozzle and the whole inner periphery of all passages form an unbroken line. Preferred Features: The cross-sectional surface formed by the passages is larger than the maximum cross-section of each valve and thus larger than the outlet cross-section of each nozzle. Further openings (44) for nozzles are arranged in the upper surface of the rinsing tank to form an open surface.



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